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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,752	02/23/2004	Sang Ho Shin	1594.1345	6177

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EXAMINER

EARLY, MICHAEL JACOBY

ART UNIT PAPER NUMBER

3744

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

C

Office Action Summary	Application No.	Applicant(s)	
	10/782,752	SHIN, SANG HO	
	Examiner	Art Unit	
	Michael J. Early	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1, 9, 11, 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Morse (U.S. 6,701,739 B2).

In regard to claim 1, Morse discloses:

- a cabinet (44 – cover) having a bottom panel (32 – base plate);
- an outdoor heat exchanger (142 – heat exchange coils) installed in the cabinet (as seen in Figures 2, 3);
- a support member (72 – evaporator mount) which supports the outdoor heat exchanger (as seen in Figure 3) with a space between a lower end of the outdoor heat exchanger and the bottom panel of the cabinet (as seen in Figure 3);
- to prevent condensed water generated from the outdoor heat exchanger from being frozen (intended use).

In regard to claim 9, Morse discloses:

- a cabinet (44 – cover) having a bottom panel (32 – base plate);
- an outdoor heat exchanger (142 – heat exchange coils) installed in the cabinet (as seen in Figures 2, 3);

Art Unit: 3744

- a spacer member (74 – horizontal support platform) separating a lower end of the outdoor heat exchanger from a seat portion (as seen in the illustration of Figure 3 below) of the bottom panel of the cabinet (as seen in Figure 3);
- to prevent condensed water generated from the outdoor heat exchanger from freezing (intended use).

In regard to claim 11, Morse discloses:

- a cabinet (44 – cover) having a bottom panel (32 – base plate);
- an outdoor heat exchanger (142 – heat exchange coils) installed in the cabinet (as seen in Figures 2, 3);
- a support member (72 – evaporator mount) including a support portion (74 – horizontal support platform), which supports a lower end of the outdoor heat exchanger (as seen in Figure 3);
 - wherein condensed water flowing on the outdoor heat exchanger falls on the bottom panel via an upper surface of the support portion of the support member (intended use);
 - wherein the support member prevents coldness from the outdoor heat exchanger from being transmitted to the bottom panel to prevent the condensed water from freezing (intended use);

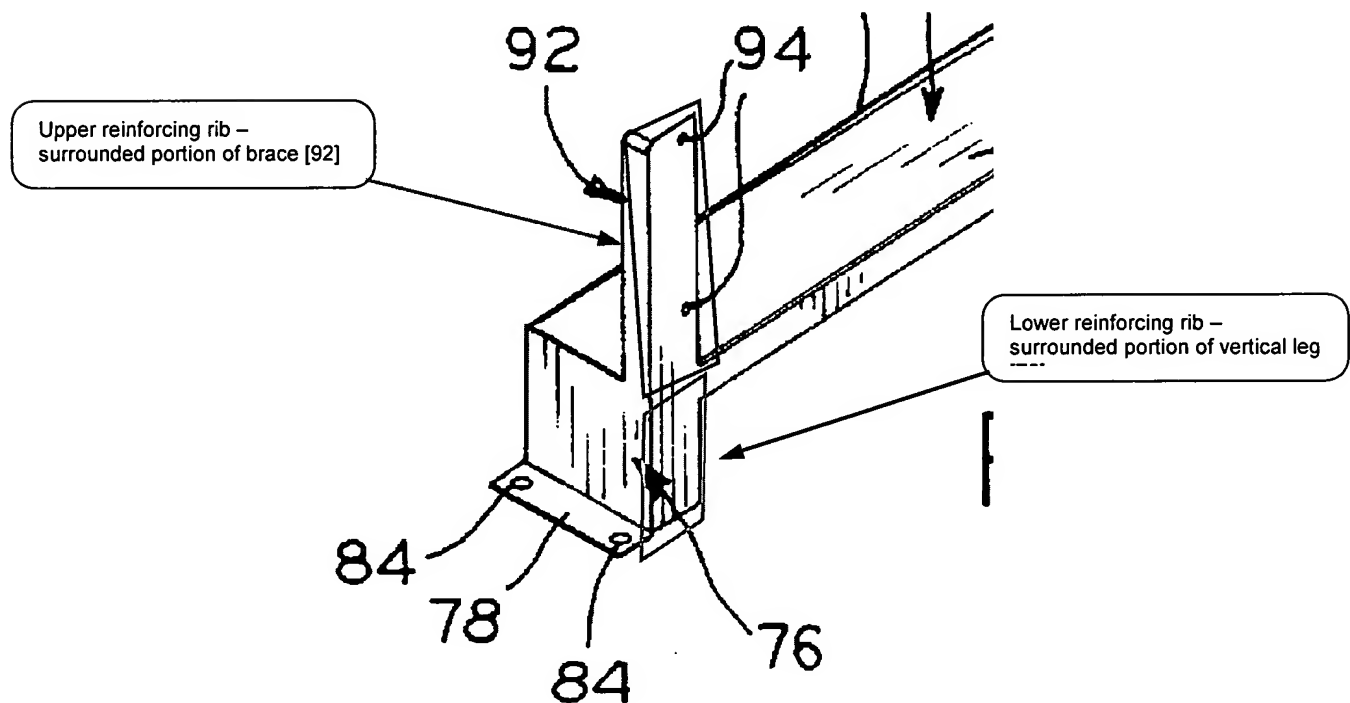
In regard to claim 12, Morse discloses:

- a cabinet (44 – cover) having a bottom panel (32 – base plate);
- an outdoor heat exchanger (142 – heat exchange coils) installed in the cabinet (as seen in Figures 2, 3);
- a support member which supports the outdoor heat exchanger, including a support portion (74 – horizontal support platform) and a fitting portion (76, 92 – vertical legs, braces);
- wherein the support member includes a plurality of lower reinforcing ribs (as seen in the partial illustration of Figure 8 below) connected between a lower surface of

Art Unit: 3744

the support portion and an inner surface of the fitting portion (as seen in Figure 8), and a plurality of upper reinforcing ribs (as seen in the partial illustration of Figure 8 below) connected between an upper surface of the support portion and the inner surface of the fitting portion (as seen Figure 8) and prevents the support portion from sagging (as seen in Figure 8);

- wherein the support member prevents coldness from the outdoor heat exchanger from being transmitted to the bottom panel to prevent the condensed water from freezing (intended use).



In regard to the limitations that are viewed as intended use, further support rejecting these claims are as follows, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the **structural** limitations of the claimed.

Art Unit: 3744

Claims 1, 3, 5-9, 11 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams et al. (U.S. 6,497,255 B1).

In regard to claims 1, 3, 5- 8; Adams et al. disclose:

- a cabinet (12 – air handling unit modular sections) having a bottom panel (35 – floor panel);
- an outdoor heat exchanger (30 – air conditioning heat exchanger coil) installed in the cabinet (as seen in Figure 1);
- a support member (75, 80, 82 – reinforcing members, stanchion, horizontal beam) supporting the outdoor heat exchanger with a space between a lower end of the outdoor heat exchanger and the bottom panel of the cabinet (as seen in Figure 6);
 - to prevent condensed water generated from the outdoor heat exchanger from being frozen (intended use);
- the bottom panel of the cabinet includes a flange (as seen in the illustration of Figure 7 below) extending upward at an edge of the bottom panel (as seen in Figure 7 – Figure 7 is an enlarged cross-sectional view of the floor panel [35] as shown in Figure 2), and wherein the support member is attached to the flange (as seen in Figure 7).
- the support member includes a fixing portion (80 – stanchion) attached to the flange (as seen in Figure 7), and a support portion (82 – horizontal beam) extending from the fixing portion to support the lower end of the heat exchanger (as seen in Figures 6, 7);
- the support member further includes a lower reinforcing portion (75 – reinforcing member) connected between a lower surface of the support portion and an inner surface of the fixing portion (as seen in Figure 7);
 - to prevent the support portion from sagging (intended use);
- the support member further includes an upper reinforcing portion (as seen in the first partial illustration of Figure 7 below) connected between an upper surface of

Art Unit: 3744

the support portion and an inner surface of the fixing portion (as seen in Figure 7);

- the fixing portion includes a fitting groove (area in which the stanchion [80] is inserted into the floor panel [35]) into which the flange is inserted to hold the support member (as seen in the second partial illustration of Figure 7 below);

In regard to claim 9, Adams et al. disclose:

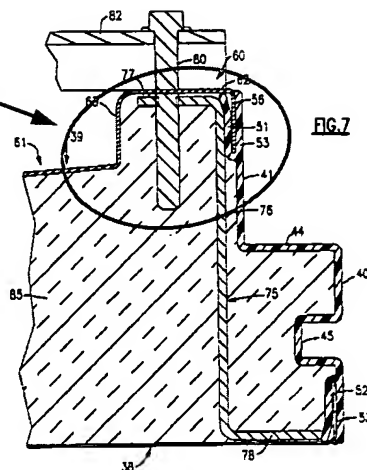
- a cabinet (12 – air handling unit modular sections) having a bottom panel (35 – floor panel);
- an outdoor heat exchanger (30 – air conditioning heat exchanger coil) installed in the cabinet (as seen in Figure 1);
- a spacer member (82 – horizontal beam) separating a lower end of the outdoor heat exchanger from a seat portion (as seen in the illustration of Figure 7 below) of the bottom panel of the cabinet (as seen in Figure 7).

In regard to claim 11, Adams et al. disclose:

- a cabinet (12 – air handling unit modular sections) having a bottom panel (35 – floor panel);
- an outdoor heat exchanger (30 – air conditioning heat exchanger coil) installed in the cabinet (as seen in Figure 1);
- a support member (80, 82 – stanchion, horizontal beam) including a support portion (82 – horizontal beam), which supports a lower end of the outdoor heat exchanger (as seen in Figure 6).

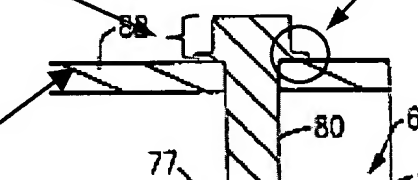
Art Unit: 3744

Flange/seat portion of bottom panel of the cabinet



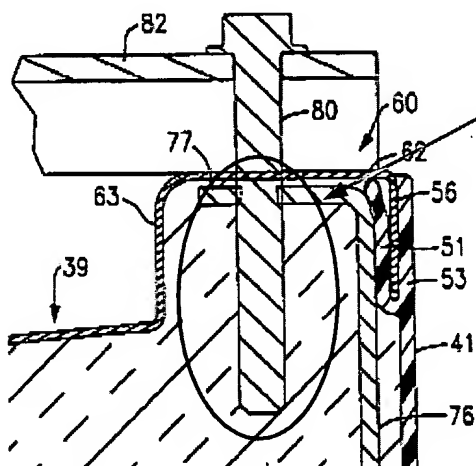
Inner surface of the fixing portion (80 – stanchion)

Upper reinforcing portion



Upper surface of the support portion (82 – horizontal beam)

(First partial illustration of Figure 7)



Fitting groove – the immediate area surrounding the stanchion (80) and enclosed within the foam polyurethane (85)

(Second partial illustration of Figure 7)

Art Unit: 3744

In regard to the limitations that are viewed as intended use, further support rejecting these claims are as follows, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the ***structural*** limitations of the claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morse as applied to claims 1 above, in view of Nakada et al. (U.S. 4,416,327).

However, Morse does not disclose:

- a heat insulating material.

Nakada et al. teach of an air conditioning unit that is comprised of a front cover (22), rear panel (24) and an evaporator (38) (as seen in Figure 2; corresponding to the claimed heat exchanger). Further disclosed is that the unit's evaporator is supported

Art Unit: 3744

from beneath by a drain pan (88; corresponding to the claimed support member) and is covered with a heat insulating material (100) (see col. 3, lines 40-41; Figure 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the existing air conditioning unit of Morse by incorporating a heat insulating material upon the components that support the apparatus' evaporator, as taught by Nakada et al., so that the evaporator will not be thermally effected by its surrounding conditions.

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams et al. as applied to claims 1 and 3 above, respectively; in view of Nakada et al.

However, Adams et al. do not disclose:

- a heat insulating material.

As stated earlier, the evaporator from Nakada et al.'s unit is supported from beneath by a drain pan (88; corresponding to the claimed support member) and is covered with a heat insulating material (100) (see col. 3, lines 40-41; Figure 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the existing air conditioning unit of Adams et al. by incorporating a heat insulating material upon the components that support the apparatus' evaporator, as taught by Nakada et al., so that the evaporator will not be thermally effected by its surrounding conditions.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. 2002/0056283 A1) in view of Nakada et al.

Art Unit: 3744

Kim discloses:

- a cabinet (20 – conditioner body; paragraph 0028) including a front panel (23 – front panel) having a discharge pod (as seen in Figure 2), a rear panel having suction holes (see paragraph 0028), both side panels having suction holes (see paragraph 0029; Figure 2), and a bottom panel (22 – base plate);
- an outdoor heat exchanger (27 – evaporator; paragraph 0034) vertically installed in the cabinet adjacent to the suction holes (as seen in Figure 2);
- a blower fan (28 – evaporator fan) installed in the cabinet to blow air toward the discharge port (see paragraph 0030; Figure 2);
- a support member (50 – condensate water tray) disposed between the bottom panel of the cabinet and the outdoor heat exchanger (as seen in Figure 2), to separate a lower end of the outdoor heat exchanger from the bottom panel of the cabinet (as seen in Figure 2).

However, Kim does not disclose:

- a heat insulating material.

As disclosed earlier, Nakada et al. teach of an air conditioning unit that is supported from beneath by a drain pan (88) corresponding to the claimed support member) that is covered with a heat insulating material (100) (see col. 3, lines 40-41).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the existing air conditioning unit of Kim by incorporating a heat insulating material upon the components that support the apparatus' evaporator, as taught by Nakada et al., so that the evaporator will not be thermally effected by its surrounding conditions.

Art Unit: 3744

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morse as applied to claim 12, in view of Nakada et al.

However, Morse does not disclose:

- a heat insulating material.

As disclosed earlier, Nakada et al. teach of an air conditioning unit that is supported from beneath by a drain pan (88) corresponding to the claimed support member) that is covered with a heat insulating material (100) (see col. 3, lines 40-41).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the existing air conditioning unit of Morse by incorporating a heat insulating material upon the components that support the apparatus' evaporator, as taught by Nakada et al., so that the evaporator will not be thermally effected by its surrounding conditions.

Allowable Subject Matter

Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Early whose telephone number is (571) 272-3681. The examiner can normally be reached on Monday - Friday, 7am - 4:30pm.

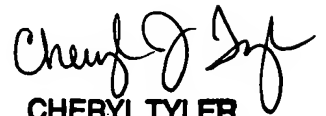
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJE
5/15/06

Michael J. Early
Patent Examiner
Art Unit 3744



CHERYL TYLER
SUPERVISORY PATENT EXAMINER